

Mineral Industry Surveys

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PRECIOUS METALS IN MAY 1999

U.S. mines produced 29,500 kilograms (kg) of gold and 160,000 kg of silver in May 1999. Production of silver was down by 7% in Nevada.

Gold

Domestic.—Placer Dome, the world's 5th leading gold producer, will drastically cut its spending during this time of low gold prices. Exploration spending will be reduced 37% from \$89 million in 1998 to \$56 million in 1999. In spite of these budget reductions, Placer Dome will spend \$20 million for general exploration, 16 million for mine site exploration, and \$20 million on the Getchell property, which includes the Turquoise Ridge project in Nevada. The Getchell underground gold mine produced almost 5 tons of gold in 1998 (Platt's Metals Week, 1999e).

International.—Customs data show that gold imports into Dubai dropped more than 45% to less than 120 tons in the first 5 months. One of the key factors that has contributed to this drop is the recent decrease in the value of the Indian rupee against the U.S. dollar, which has affected Indian demand for gold bullion re-exported from Dubai. India has been the top market for Dubai's gold for the past 3 decades (Platt's Metals Week, 1999c).

Harmony, an independent South African gold miner, has expanded by merging with West Rand Consolidated Mines and Kalahari Goldridge Mining. Harmony will add more than 30 tons per year to its gold output, which will make it South Africa's third-largest gold mining company behind AngloGold and Gold Fields (Platt's Metals Week, 1999d).

China has plans to reform its gold products pricing system to keep pace with changes in the world gold market. China's gold ornaments are priced \$2.50 to \$4.20 higher than those in Hong Kong, Taiwan, Thailand, and Singapore. In addition, taxes paid by China's enterprises are higher than those in other southeast Asian

countries, with a value-added tax rate and consumption tax rate at 17% and 15%, respectively. South Korea and Thailand have a value-added tax levy of 10%, and Singapore charges only a 3% consumer tax. China consumed about 192 tons of gold in 1998, making it the 4th largest gold market in the world, as well as the top consumer in Asia (Platt's Metals Week, 1999b).

Update.—As the price of gold decreased to new lows, and appeared destined to decline to even lower levels, Swiss and British officials publicly defended their decisions to sell part of their gold reserves amid industry charges that the proposed gold sales were responsible for depressing gold's price. Bank of England deputy governor David Clementi indicated that the gold price will not be judged solely by the gold auction but rather over a longer space of time. The UK Treasury planned to sell 125 metric tons of gold from its reserves in lots of 25 tons every other month starting July 6. It could sell up to 415 tons of gold from its holdings of 714 tons. Swiss National Bank (SNB) vice-chairman Jean-Pierre Roth stated that the SNB will not adopt a strategy that could drive the gold price down. Proposed sales of 1,300 tons of gold from its reserves of 2,590 tons will be spread out. It is expected that Swiss gold sales could begin as early as spring 2000, once a new Swiss federal constitution has been passed and the new Federal Law on Currency and Payment Instruments is in force (Platt's Metals Week, 1999a).

The World Gold Council reports that despite the news about an impending sale of gold from the reserves of the International Monetary Fund (IMF) to finance aid to developing nations, the sale is not yet guaranteed. For this sale to take place, 85% of the IMF's executive board would have to approve the transaction. Congressional approval is needed for the United States's support of this sale. Since the United States has 18% representation on the IMF executive board, Congress could veto the IMF gold sale.

A high-level source at the House Banking and Financial Services Committee, which has oversight of the IMF gold sale, reports that approval of the sale is likely but at less than the 150 to 300 tons that are being discussed (American Metal Market, 1999b).

There was a sharp increase in gold business on the London bullion market during May. The average daily turnover was 1.0 million kg of gold, up more than a third from April. The increase was a result of lower gold prices, which followed the announcement by the Bank of England to sell more than half of the United Kingdom's gold reserves (American Metal Market, 1999c).

Silver

Silver's 1998 price performance was the best in 11 years, owing mainly to steady industrial fabrication demand and strong investment interest. The average silver price in 1998 was \$5.54 per troy ounce (oz). The price peaked at \$7.81/oz in early February 1998 following the announcement of a U.S.-based investment firm's purchase of more than 4 metric tons (t) of silver. The price fell in the second half of the year, reaching a low of \$4.69/oz in December.

After 3 years of growth, fabrication demand for silver fell by 2.2% in 1998 to 26,144 t. The fall in the world total was primarily the result of a sharp decline in East Asia and Indian fabrication demand. By contrast, North American and European demand for silver were both up 9%. North American demand rose to 6,670 t, with the United States consuming 5,870 t of that total. Again, the United States was the world's largest user of silver, followed by Japan (3,510 t) and India (3,240 t) (Silver Institute, 1999a).

In 1998, global photographic demand for silver rose by 5.6% to over 7,620 t. The United States accounted for 36% of world demand followed by Japan which consumed 24% of the world demand. Mine production of silver increased for the fourth consecutive year, up 5% to a record 16,970 t (Silver Institute, 1999b, p. 66-80).

Sunshine Mining and Refining Co. announced a significant increase in proven and probable reserves at its Pirquitas silver mine in northwest Argentina. The increase is reportedly the first step in the previously announced optimization of the preliminary feasibility study of the property. Using a cutoff grade of 60 g/t, the mine contains a measured/indicated mineralized inventory of 22.8 Mt with an average grade of 189 g silver, a tin grade of 0.30%, and a zinc grade of 0.61%. Fully diluted, Sunshine estimates economically recoverable and probable reserves totaling 3,600 t silver, 70,760 t of tin, and 123,000 t of zinc. The estimate assumes 78% average silver recovery, 63% average tin recovery, and 41% average zinc recovery (Engineering & Mining Journal, 1999).

Platinum-Group Metals

In 1998, jewelry fabrication demand for platinum in China surged 70% to 19,300 kilograms (kg) and contributed to a 4% increase in global demand to 166,400 kg. Of total platinum demand, jewelry accounted for 73,700 kg, autocatalysts for 56,900 kg (of which about 12,600 kg were recovered from spent autocatalysts), other industry applications for 38,600 kg and investment for 9,800 kg. Platinum demand in autocatalysts

moderated in 1998 (the effect of lower vehicle production in Asia and Latin America, and the growing use of palladium-based catalyst systems in North America), being somewhat offset by an increase in Europe of sales of diesel engines which require autocatalysts carrying higher platinum loadings. Platinum demand for investment increased by 2,330 kg to 9,800 kg, representing only about 6% of demand (Johnson Matthey, 1999, p. 3-7).

Update.—The Defense National Stockpile Center (DNSC) announced that it would test online sales of PGM on Wednesday, May 12, 1999. This was only a test of the system; no material was actually sold. DNSC was scheduled to hold its first online commodity sales for PGM in early June. Industry was invited to participate in a "mock" bidding in order to test the system. Material available for sale was posted on the website (www.dnsc.dla.mil) by 11:30 a.m. EST. Quotes from bidders were due by 1:30 p.m. EST. DLA switched to paperless online sales in July. Visitors to the DLA Procurement Gateway site, at progate.daps.mil/home/, can search all active request for questions (RFQ) and contract awards. Prospective contractors can register to have chosen RFQ e-mailed to them automatically. Another branch of the gateway, set to be up and running by September 30, will take bids online. Vendors can search the RFQ section by keyword, national stock number, federal stock class, buyer code, and date range. The Collection Download section puts all RFQs in a given stock class into a single zipped file. An RFQ search produces a table of solicitations, stock numbers, and closing dates of relevant RFQs. Clicking on the stock number link shows item descriptions, technical data, and contract history, including past prices. No longer do businesses have to learn about procurement histories through the Freedom of Information Act. A password system guards against tampering with user profiles (Government Computer News, 1999).

Update.—The DNSC announced on August 3, 1999, the July PGM sales results under the Basic Ordering Agreement, DLA-PGM-001. Since July 1, 1999, DNSC has sold:

Iridium	24.883 kg
Palladium	101.808 kg
Platinum	498.205 kg

The sale had a total value of \$6.9 million. The companies that were awarded the material are: A-1 Specialized Services & Supply Inc., Croydon, PA; Crystal Bay Trading, Pomona, NY; Heraeus Precious Metals Management, Inc., New York, NY; Johnson Matthey Inc., Wayne, PA; Mitsui & Co. (USA), New York, NY. For additional information visit the DNSC website at (www.dla.dnsc.mil). For other inquiries call Cheryl Deister at (703) 767-5475 (Defense National Stockpile Center, 1999).

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———1999c, Dubai gold imports down 45.7%: Platt's Metals Week, v. 70, no. 26, June 28, p. 9.

———1999d, Harmony gold mine merges with WRCM, KGM: Platt's Metals Week, v. 70, no. 24, June 14, p. 2.

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———1999b, World Silver Survey 1999: Silver Institute, 84 p.

TABLE 1
MINE PRODUCTION OF RECOVERABLE GOLD AND SILVER IN THE UNITED STATES, BY STATE 1/

(Kilograms)

Gold	Arizona	California	Nevada	Other States 2/	Total
1998: p/					
May	182	1,940	24,400 r/	6,260 r/	32,300 r/
June	183	2,000	25,600 r/	6,030 r/	33,300 r/
July	175	2,000	24,900 r/	6,230 r/	32,800 r/
August	181	1,800	26,400 r/	6,450 r/	34,400 r/
September	181	1,850	26,200 r/	6,000 r/	33,700 r/
October	189	1,850	25,700 r/	5,780 r/	33,600 r/
November	182	1,840	25,000 r/	5,630 r/	32,600 r/
December	179	1,830	25,500 r/	5,920 r/	33,500 r/
January-December r/	1,840	18,700	273,000	72,700 r/	366,000 r/
1999:					
January	192	1,690	21,800 r/	5,270 r/	29,000 r/
February	177	1,580	20,700 r/	5,050 r/	27,500 r/
March	199	1,790	21,100 r/	5,440 r/	28,500 r/
April	190	1,820	21,600 r/	5,570 r/	29,200 r/
May	198	1,830	22,500	5,050	29,500
January-May	956	8,700	108,000	26,400	144,000
Silver	Arizona	Idaho	Nevada	Other States 3/	Total
1998: p/					
May	15,400	37,800	56,600 r/	57,500 r/	167,000 r/
June	14,400	39,000	71,200 r/	60,200 r/	185,000 r/
July	17,900	36,200	50,400 r/	57,400 r/	162,000 r/
August	18,100	36,700	51,300 r/	61,700 r/	168,000 r/
September	18,100	36,200	79,300 r/	61,200 r/	195,000 r/
October	17,300	36,200	64,100 r/	62,000 r/	180,000 r/
November	14,400	36,200	69,800 r/	60,000 r/	180,000 r/
December	15,700	36,200	97,900	61,300 r/	211,000 r/
January-December	211,000	447,000	670,000	736,000	2,060,000
1999:					
January	15,500 r/	33,400	61,900	63,800 r/	175,000 r/
February	14,800 r/	33,400	59,900 r/	58,300 r/	166,000 r/
March	17,700	33,400	77,600 r/	60,800 r/	190,000 r/
April	16,600	33,400	54,900 r/	62,500 r/	167,000 r/
May	16,800	33,400	51,300	58,700	160,000
January-May	81,300	167,000	306,000	304,000	858,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes Alaska, Colorado, Idaho, Montana, New Mexico, South Carolina, South Dakota, Utah, and Washington.

3/ Includes Alaska, California, Colorado, Missouri, Montana, New Mexico, New York, South Carolina, South Dakota, Tennessee, Utah, and Washington.

TABLE 2
SELECTED PRECIOUS METAL PRICES

(Dollars per troy ounce)

	Gold	Silver	Platinum	Palladium
<u>Engelhard Industries:</u>				
<u>1998:</u>				
<u>Year</u>				
Low/date	274.52 (August 28)	4.72 (August 31)	337.00 (October 30)	205.00
High/date	314.33 (April 24)	7.25 (February 6)	434.00 (April 14)	417.00
Average	295.24	5.54	374.61	289.76
<u>1999:</u>				
<u>April:</u>				
Low/date	279.62/6	4.91/14	347.00/29	315.00/30
High/date	287.74/30	5.38/30	366.00/20	388.00/20
Average	283.60	5.09	359.19	364.52
<u>May:</u>				
Low/date	269.71/28	4.91/28	351.00/4	293.00/4
High/date	289.09/6	5.47/13	367.00/28	349.00/14 and 18
Average	278.05	5.29	358.20	333.25
<u>June:</u>				
Low/date	259.24/17	4.91/4	346.00/22	327.00/29 and 30
High/date	268.25/2	5.27/30	369.00/4,9 and 10	355.00/9
Average	262.41	5.07	358.55	341.73
<u>Year to date</u>				
Low/date	259.24 (June 17)	4.91 (January 4 , April 14 , May 28 and June 4)	344.00 (January 28)	293.00 (May 4)
High/date	295.15 (March 11)	5.70 (February 12)	386.00 (February 23)	388.00 (April 20)
Average	281.09	5.22	361.78	347.18
<u>Handy and Harman:</u>				
<u>1998:</u>				
Average	294.12	5.53	XX	XX
<u>1999:</u>				
April	282.45	5.09	XX	XX
May	276.94	5.30	XX	XX
June	261.31	5.08	XX	XX
Average year to date	279.96	5.22	XX	XX
<u>London Final: 1/</u>				
<u>1998:</u>				
Average	294.16	5.55	XX	XX
<u>1999:</u>				
April	282.62	5.07	XX	XX
May	276.44	5.27	XX	XX
June	261.31	5.03	XX	XX
Average year to date	279.99	5.20	XX	XX

XX Not applicable.

1/ Silver price reported as "London Spot/US Eq."

Source: Platt's Metals Week.

TABLE 3
U.S. IMPORTS AND EXPORTS OF GOLD 1/

(Kilograms of gold content, unless otherwise specified)

Period and country	Ores and concentrates 2/	Doré and precipitates	Refined bullion 3/	Ash and residues	Total 4/	Waste and scrap (gross weight)	Metal powder (gross weight)	Gold compounds (gross weight)
Imports for consumption:								
1998	2,540 r/	14,100	257,000	4,670	278,000	16,700	12,800	9,820
1999:								
February	2	1,830	13,800	1	15,600	1,250	478	801
March	5	1,270	19,300	40	20,600 r/	2,340	429	223
April:								
Argentina	--	--	222	--	222	--	--	--
Austria	--	--	287	--	287	--	--	--
Brazil	--	--	3,270	--	3,270	--	--	--
Canada	1	--	3,970	--	3,970	293	705	--
Chile	--	1	669	--	669	--	--	--
Colombia	--	--	447	--	447	116	--	--
Dominican Republic	--	--	2	--	2	369	--	--
Ecuador	--	--	40	--	40	30	--	--
Malaysia	--	--	10	--	10	76	1	1
Mexico	--	488	164	(5/)	652	156	4	--
Netherlands Antilles	--	--	65	--	65	--	--	--
Nicaragua	--	--	481	--	481	--	--	--
Norway	--	--	79	--	79	--	--	--
Peru	--	238	856	--	1,090	--	--	--
South Africa	--	--	142	--	142	5	--	--
Switzerland	--	--	86	--	86	--	--	--
United Kingdom	--	--	988	--	988	--	--	--
Other	3	14	--	--	17	181	--	10
Total	4	741	11,800	(5/)	12,500	1,230	709	11
Year to date	81	6,210	64,600	54	71,000	6,350	2,410	2,390
Exports:								
1998	401	91,600	430,000	--	522,000	58,900	196	781,000
1999:								
February	26	6,840	13,200	--	20,000	2,550	11	121,000
March	--	5,460	12,900	--	18,400	3,100	27	93,900
April:								
Argentina	--	--	167	--	167	--	--	--
Belgium	--	--	4	--	4	601	--	--
Bolivia	--	--	954	--	954	--	--	--
Canada	--	386	2,940	--	3,330	1,510	3	26,100
Germany	27	--	6	--	33	45	6	1
Hong Kong	--	--	--	--	--	--	--	261
Hungary	--	--	--	--	--	--	--	402
Italy	--	--	--	--	--	121	--	17
Korea, Republic of	--	1	990	--	991	--	--	--
Mexico	--	--	2,990	--	2,990	--	--	--
Netherlands	--	--	162	--	162	--	--	--
Peru	--	--	1,250	--	1,250	--	--	--
Sweden	--	--	1	--	1	197	--	--
Switzerland	--	5,260	7,150	--	12,400	--	--	--
Turkey	--	--	67	--	67	--	--	5
United Arab Emirates	--	--	927	--	927	--	--	--
United Kingdom	1	207	6,990	--	7,200	161	46	--
Other	--	--	94	--	94	11	1	10
Total	28	5,860	24,700	--	30,600	2,650	55	26,800
Year to date	86	24,900	62,200	--	87,200	9,800	101	262,000

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes gold content of base metal ores, concentrates, and matte imported for refining.

3/ Bullion also moves in both directions between U.S. markets and foreign stocks on deposit in the Federal Reserve Bank. Monetary gold excluded.

4/ "Waste and scrap," "Metal powder," and "Gold compounds" not included in "Total."

5/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 4
U.S. IMPORTS AND EXPORTS OF SILVER, REFINED AND AS NITRATE 1/

(Kilograms)

Period and country	Bullion (silver content)	Doré (silver content)	Total (silver content)	Other unwrought silver (gross weight)	Metal powder (gross weight)	Silver nitrate (gross weight)
Imports for consumption:						
1998	2,800,000	340,000	3,140,000	102,000	129,000	8,030
1999:						
February	268,000	39,100	308,000	18,000	10,500	15
March	261,000	38,300	299,000	4,430 2/	1,240	784
April:						
Brazil	--	--	--	--	500	--
Canada	135,000	18,700	154,000	4,280	--	32
Chile	--	76,200	76,200	--	--	--
Colombia	--	340	340	--	--	--
Japan	--	--	--	--	4,000	--
Mexico	49,600	5,930	55,500	(3/)	--	--
Nicaragua	--	149	149	--	--	--
Panama	160	--	160	--	--	--
Peru	3,010	--	3,010	--	4,950	--
Other	--	--	--	(3/)	81	--
Total	188,000	101,000	289,000	4,280	9,530	32
Year to date	979,000	198,000	1,180,000	27,600	37,000	1,660
Exports:						
1998	2,250,000	241,000	2,490,000	39,900	299,000	164,000
1999:						
February	57,100	1,580	58,700	3,970	14,500	6,350
March	66,600	9,230	75,900	20,800	20,700	4,080
April:						
Belgium	--	--	--	--	285	--
Canada	27	--	27	434	1,140	666
China	--	--	--	--	800	1,000
Dominican Republic	--	--	--	120	--	--
France	--	--	--	96	21	--
Germany	--	--	--	156	9,010	--
Guatemala	56	--	56	--	--	--
Hong Kong	--	--	--	36	1,510	--
Israel	--	--	--	--	125	--
Japan	--	--	--	--	4,160	--
Korea, Republic of	--	--	--	180	1,020	--
Mexico	672	11,100	11,800	91	464	362
Netherlands	--	--	--	31	2,840	--
Singapore	--	--	--	--	19,200	--
Sweden	--	--	--	--	2,760	--
Switzerland	--	1,980	1,980	--	76	--
Taiwan	773	--	773	862	584	30
Thailand	--	--	--	851	--	--
United Arab Emirates	37,400	--	37,400	--	--	--
United Kingdom	--	--	--	159	1,170	--
Uruguay	--	1,830	1,830	--	--	--
Other	--	--	--	28	--	--
Total	39,000	15,000	53,900	3,040	45,100	2,060
Year to date	271,000	27,700	298,000	29,800	101,000	15,500

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ All or part of these data have been referred to the Bureau of the Census for verification.

3/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 5
U.S. IMPORTS AND EXPORTS OF SILVER, RAW, SEMIMANUFACTURED, AND WASTE AND SCRAP 1/

(Kilograms of silver content, unless otherwise specified)

Period and country	Silver ores and concentrates	Base metal ores and concentrates	Ash and residues	Total	Semimanufactured form 2/ 3/ (gross weight)	Waste and scrap (gross weight)
Imports for consumption:						
1998	181,000	14,200	47,200	243,000	181,000	1,800,000
1999:						
February	1	--	3,810	3,810	10,200	168,000
March	--	--	51,800 4/	51,800	12,100	93,600
April:						
Australia	--	--	143	143	--	--
Canada	--	--	2,370	2,370	357	34,900
Costa Rica	--	--	--	--	--	4,120
Dominican Republic	--	--	--	--	--	1,470
Germany	--	--	--	--	598	38,400
Italy	--	--	--	--	12	484
Japan	--	--	--	--	245	25
Korea, Republic of	--	--	--	--	121	2
Malaysia	--	--	--	--	--	13,500
Mexico	--	--	--	--	1,020	4,340
Peru	--	--	--	--	--	2,030
Russia	--	--	--	--	--	75
Switzerland	--	--	--	--	47	16
United Kingdom	--	--	1,680	1,680	214	13,100
Other	--	--	(5/)	(5/)	32	107
Total	--	--	4,200	4,200	2,650	112,000
Year to date	10,400	--	62,500	72,900	31,500	509,000
Exports:						
1998	6,540	--	--	6,540	154,000	1,060,000
1999:						
February	383	--	--	383	9,850	122,000
March	14,700	--	--	14,700	10,100	139,000
April:						
Argentina	--	--	--	--	51	--
Australia	--	--	--	--	64	--
Belgium	--	--	--	--	606	15,200
Canada	--	--	--	--	3,220	47,600
China	--	--	--	--	258	17,000
Egypt	--	--	--	--	158	--
France	--	--	--	--	233	--
Germany	--	--	--	--	36	19,500
Hong Kong	--	--	--	--	57	534
India	--	--	--	--	4	86
Israel	--	--	--	--	126	--
Italy	--	--	--	--	662	2,250
Japan	--	--	--	--	256	3,340
Korea, Republic of	--	--	--	--	105	115
Mexico	--	--	--	--	373	--
New Zealand	--	--	--	--	64	--
Singapore	--	--	--	--	86	--
Spain	--	--	--	--	660	--
Sweden	--	--	--	--	--	5,080
Taiwan	--	--	--	--	1,660	--
United Kingdom	--	--	--	--	273	1,250
Other	40	--	--	40	111	43
Total	40	--	--	40	9,060	112,000
Year to date	35,400	--	--	35,400	39,800	518,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Containing 99.5% or more by weight of silver. Imports only.

3/ Semimanufactured (including silver plated with gold or platinum) forms of silver.

4/ All or part of these data have been referred to the Bureau of the Census for verification.

5/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 6
U.S. IMPORTS OF PLATINUM-GROUP METALS 1/

(Kilograms of metal content)

Period and country	Platinum grain and nuggets	Platinum sponge	Other unwrought platinum	Platinum, other	Platinum waste and scrap	Platinum coins	Unwrought palladium	Palladium, other	Iridium 2/	Unwrought osmium	Unwrought ruthenium	Rhodium 3/
Imports for consumption:												
1998	2,670	72,700	10,200	11,200	3,580	451	160,000	16,300	1,950	71	8,880	13,400
1999:												
February	277	4,000	185	1,150 r/	1,140 r/	1	27,200	820 r/	200	--	454 r/	424
March	575	3,680	679 r/	4,750	71 4/	5	17,400	1,510	91	--	470	2,740
April:												
Australia	--	--	--	--	--	2	--	--	--	--	--	--
Belgium	--	188	--	--	--	--	1,010	349	--	--	--	2
Brazil	--	--	--	100	--	--	--	--	--	--	--	--
Canada	12	--	(5/)	27	146	--	437	13	--	--	--	--
China	--	--	--	--	--	--	31	--	--	--	--	3
Colombia	--	--	55	(5/)	--	--	--	--	--	--	--	--
France	--	15	--	--	74	--	--	--	--	--	--	1
Germany	39	555	57	5	38	--	295	41	23	5	47	23
Hong Kong	--	--	--	--	47	--	80	--	--	--	--	--
India	--	--	--	3	--	--	--	--	--	--	--	--
Israel	--	--	18	--	--	--	--	--	--	--	--	--
Italy	--	14	--	--	--	--	39	--	--	--	--	--
Japan	16	111	11	2	--	--	614	2	--	--	--	15
Malaysia	(5/)	--	--	--	2	--	--	--	--	--	--	--
Mexico	8	--	--	--	9	--	--	--	--	--	--	--
Netherlands	--	--	--	1	--	--	--	--	--	--	--	--
Norway	--	109	--	--	--	--	47	76	--	--	--	--
Russia	--	372	28	--	--	--	19,800	648	--	--	--	--
Singapore	--	--	--	25	--	--	--	--	--	--	--	--
South Africa	--	3,220	--	--	--	--	2,530	46	34	--	869	553
Spain	--	--	--	18	--	--	--	--	--	--	--	--
Switzerland	--	--	83	87	--	--	2	1,570	--	--	--	--
United Kingdom	44	2,330	1	44	85	10	115	47	86	--	31	13
Venezuela	--	--	--	--	(5/)	--	--	--	--	--	--	--
Zambia	--	--	--	--	1	--	--	--	--	--	--	--
Total	119	6,920	254	313	403	12	25,000	2,810	143	5	946	611
Year to date	1,070	20,100	2,910	6,730	1,710	23	84,300	6,200	548	5	2,670	4,520

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Unwrought and other forms of iridium.

3/ Unwrought and other forms of rhodium.

4/ All or part of these data have been referred to the Bureau of the Census for verification.

5/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 7
U.S. EXPORTS OF PLATINUM GROUP METALS 1/

(Kilograms of metal content, unless otherwise specified)

Period and country	Palladium 2/	Platinum 2/	Platinum waste and scrap	Iridium osmium and ruthenium 2/ 3/	Rhodium 2/
Exports:					
1998	36,700	14,300	6,570	905	811
1999:					
February	3,530	649	716	124	1
March	4,020	880	304	71	3
April:					
Australia	8	5	--	--	--
Belgium	12	2	44	--	(4/)
Bermuda	1	--	--	--	--
Brazil	13	--	--	--	--
Canada	82	64	29	--	--
China	163	1	--	--	--
Cyprus	2	--	--	(4/)	--
Denmark	--	2	--	(4/)	--
France	27	26	--	--	--
Germany	124	80	90	2	19
Hong Kong	1	--	--	--	(4/)
India	(4/)	--	--	--	(4/)
Ireland	29	63	--	--	--
Israel	186	2	--	--	--
Italy	33	50	--	--	--
Japan	244	180	36	3	--
Korea, Republic of	57	1	--	--	--
Kuwait	(4/)	--	--	--	--
Malaysia	2	--	--	--	--
Mexico	6	2	--	--	--
Netherlands	140	11	--	--	--
New Zealand	4	--	--	--	--
Norway	10	--	--	--	--
Poland	1	--	--	--	--
Romania	1	--	--	--	--
Saudi Arabia	2	--	--	--	--
Singapore	4	--	--	--	--
South Africa	250	--	(4/)	--	(4/)
Spain	(4/)	--	--	--	--
Sweden	8	7	1	--	--
Switzerland	1	2	--	--	--
Taiwan	1,270	1	--	--	--
Thailand	3	--	--	--	--
United Arab Emirates	--	(4/)	--	--	--
United Kingdom	413	514	222	10	--
Total	3,100	1,010	422	15	19
Year to date	13,500	5,920	1,650	241	23

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Unwrought and other forms.

3/ Gross weight.

4/ Less than 1/2 unit.

Source: Bureau of the Census.